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ABSTRACT

This manual contains guidelines for editing task statements written according to the principles and techniques of functional job analysis to be used in preparing input data to the National Task Bank. It does not include any descriptive matter about the task bank, which was developed to provide a model for State and local public welfare agencies through the application of systems approach and functional job analysis to agency management. Related documents are available as VT 020 661 and VT 020 662 in this issue.
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EDITING MANUAL

FOR USE WITH
THE NATIONAL TASK BANK

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I N T R O D U C T I O N

This manual is an attempt at definitive, illustrative guidelines for editing task statements, written according to the principles and techniques of FJA. Therefore, this Manual is intended for use by persons trained and competent in FJA task analysis. It is not intended as introductory material to the technique.

In no case do we intend to suggest that our techniques are so far advanced that only our answer is possible. The important thing to recognize is that we do have a technique and rationale that, when used as described herein, can produce reliable and valid task statements, useful in personnel operations.

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FORMAT

In an attempt to provide a practical how-to manual, we have organized the material around eight questions. These questions, which editors should ask about each task, are each explained through brief narrative and examples. The eight questions are summarized here for quick reference.

1. Does the end Result of the task make a contribution to the organizational objective?
2. Does the language in the Worker Action phrase of the Task Statement support the Worker Function levels?
3. Are the Worker Action phrase and the Result phrase of the Task statement in reasonable relation to one another?
4. Is the Result identified in the task a verifiable Result?
5. Do the Worker Action and the Result phrases of the Task Statement support the orientation percentages assigned?
6. Are the Performance Standards specified useful to a supervisor and to a worker?
7. Does the Training Content reflect the knowledges and abilities required to perform the task?
8. Is there more than a one-level spread between Data, Worker Instructions, and Reasoning Scale ratings?

1. DOES THE END RESULT OF THE TASK MAKE A CONTRIBUTION TO THE ORGANIZATIONAL OBJECTIVE?

-Can an independent reader see the task output as a contribution to an objective?

The relationship of a task to an objective is evident in the definition of a task:

"A task is an action or action sequence, grouped through time, designed to contribute a specified end result to the accomplishment of an objective, and for which functional levels and orientation can be reliably assigned. The task action, or action sequence, may be primarily *physical*, such as operating an electric typewriter; or primarily *mental*, such as analyzing data; and/or primarily *interpersonal*, such as consulting with another person." 1/

A task is not "make-work" or "busy-work", but is an activity designed to contribute to an objective. This is confirmed when the objective provides clear-cut criteria for the achievement of the task Result.

1/ An Introduction to Functional Job Analysis: A Scaling of Selected Tasks from the Social Welfare Field, Sidney A. Fine and Wretha W. Wiley, W.E. Upjohn Institute for Employment Research, C. 1971, pp. 9-10.

2. DOES THE LANGUAGE IN THE WORKER ACTION PHRASE OF THE TASK STATEMENT SUPPORT THE WORKER FUNCTION LEVELS?

-Do an independent reader's Worker Function rankings agree with yours?

IF NOT,

A. Reexamine:

Are the Action verbs explicit and concrete, or do they describe work to be done on the level of objectives, but not specific actions of a worker?

B. Rewrite task:

Add or subtract material until independent readers get the same picture of what the worker is expected to do.

C. Remember, however:

That the original intent of the task should not be sacrificed in the consensus process. The edited task must be clear to the original writer, to resource people, to other editors, and to you.

EXAMPLES:

2. Guides/Escorts clients from reception/intake area of the agency to a specific office in agency upon request of supervisor, in order to enable client to reach a particular office.

Rater "A"

Data People Things			Data People Things			Reas. Math.Lang		
W.F.-LEVEL			W.F.-ORIENTATION			G.E.D.		
2	1B	1A	65%	25%	10%	1	1	1

Rater "B"

Data People Things			Data People Things			Reas. Math.Lang		
W.F.-LEVEL			W.F.-ORIENTATION			G.E.D.		
2	2	1A	50%	45%	5%	1	1	1

Independent raters "A" and "B" disagreed on the level of the People function involved in guiding and escorting clients. As written, the task does not involve more than physically leading the client to an office. However, rater "B" thought that the worker would be talking with the client, putting him at ease, etc. Rater "A" conceded this possibility, but felt it should be made explicit.

3. ARE THE WORKER ACTION PHRASE AND THE RESULT PHRASE IN THE TASK STATEMENT IN REASONABLE RELATION TO ONE ANOTHER?

-Is the Worker Action described likely to produce the stated Result?

EXAMPLES:

1. Examines field visit schedule, determines suitable appointment time for out-of-office visit, writes/types applicant's name, address, and phone number, in order for field visit staff to make visit commitments.

-Scanning an appointment schedule and selecting a suitable appointment time does not result in another worker making a visit commitment. The Action phrase and the Result phrase are not in reasonable relation to one another. What has happened is that the unit's objective has been used as the Result above requires more tasks than the Action describes. This Worker Action alone cannot reasonably be expected to achieve this Result.

A more reasonable Result of the Action phrase would be,

"...to prepare/keep record of scheduled appointments."

-Scanning an appointment schedule, determining and recording appointment time, can reasonably be expected to produce a record of scheduled appointments.

2. Sets up projector, lectern, blackboard, and other equipment, adjusts lighting and ventilation, in order that community meeting to interpret agency policy and procedures on income maintenance be carried out.

-Setting up the equipment in a meeting room does not result in a meeting's being held.

A more reasonable Result would be,

"...to prepare equipment and room conditions for community meeting."

-Setting up the needed equipment and readying the room can produce the Result of preparing the room for the meeting.

4. IS THE RESULT IDENTIFIED IN THE TASK A VERIFIABLE RESULT?

- Does the worker know what he is expected to produce?
- Does the supervisor know what he should evaluate?

EXAMPLES:

1. *...in order to make record of scheduled appointments.*
2. *...to prepare equipment and room conditions for community meeting.*
3. *...to prepare letter for signature.*

All of the above Results or outputs are relatively concrete and tangible. In each case, the expected output is clear, both to the supervisor and to the worker. Data and Things oriented tasks tend to produce tangible Results.

The Result phrases in People oriented tasks, however, tend to be less tangible, and less easily observed. For example,

4. *...to persuade families to apply for a foster child.*
5. *...to inform client of agency's policies and procedures.*

When the Result phrase does not describe a tangible, easily observed output (as in examples 4 and 5), the Results have to be inferred from the more generalized output represented by the objective and included in a Performance Standard:

A Performance Standard derived from an objective which clarifies 4 above, might be:

.X% of families contacted submit applications for foster child.

Criteria of this nature will usually be interpreted in relation to an estimated result on the basis of some previous related experience or test. It is necessary to remember that the Standard indicated probably depends on the inputs of a number of tasks, and not just the one indicated.

A Performance Standard derived from an objective which clarifies 5 above, might be:

.Less than X# complaints from clients that they did not understand how to obtain services, due to incomplete or inaccurate explanation of policies and procedures by worker.

5. DO THE WORKER ACTION AND THE RESULT PHRASES OF THE TASK STATEMENT SUPPORT THE ORIENTATION PROPORTIONS ASSIGNED?

EXAMPLES:

1. *Drives own/agency car, upon request of supervisor, in order to transport clients to agency, neighborhood center, doctor's office, etc.*

Independent raters assigned the following percentages to this task:

Rater "A"

<u>Data People/Things</u>		
<u>W.F.-ORIENTATION</u>		
10%	40%	50%

Rater "B"

<u>Data People Things</u>		
<u>W.F.-ORIENTATION</u>		
40%	5%	55%

Both raters' emphasis on Things (driving to transport to a specific place) is obviously correct, but without further detail, both can justify their secondary emphasis on Data or People by making appropriate inferences. Such inferences should be made explicit.

Rater "A" : The rater emphasizing Data may have inferred knowledge of traffic patterns, routings, signs, regulations, forms to be filled out, etc. However, in order for other editors/readers to agree with this rating, the inferences must be made explicit:

Drives own/agency car, upon request of supervisor, selecting routes on basis of knowledge of city and schedule, in order to transport client to agency, neighborhood center, doctor's office, etc.

Rater "B": The rater emphasizing People may have inferred interaction between client and driver. Such inference should be made explicit, in order for other editors/readers to agree with the rating:

Drives own/agency car, upon request of supervisor, greeting/talking with clients, in order to transport clients to agency, neighborhood center, doctor's office, etc.

A third possibility could involve a higher Things rating, and equally low People/Data ratings. This possibility would exclude either of the above inferences and emphasize the fact that the driver followed predetermined routes.

EXAMPLES: (cont'd)

2. Evaluates accepted applications, considers nature of case, current work load, and competence of staff, in order to decide on assignment of new cases for foster home study.

Independent raters assigned the following percentages to this task:

Rater "A"

<u>Data People Things</u>		
<u>W.F.-ORIENTATION</u>		
40%	55%	5%

Rater "B"

<u>Data People Things</u>		
<u>W.F.-ORIENTATION</u>		
90%	5%	5%

There is no direct involvement with People in this task. "Evaluating accepted applications..." is primarily a Data oriented task, as it has been analyzed by Rater "B".

Rater "A" may have inferred that the worker was also verbally assigning cases to staff members. However, this is not stated in the task as it was written. A Task Statement which would include this inference, and would reflect Rater "A's" orientation assignments, is:

3. Verbally assigns tasks/gives directions to the clerical staff/worker, explaining and answering questions about prescribed and discretionary elements of procedures and performance requirements, based upon prior assessment of operation flow, work load, and worker's capabilities, in order to ensure that the worker understands his duties and responsibilities.

6. ARE THE PERFORMANCE SPECIFIED USEFUL TO A SUPERVISOR AND TO A WORKER?

- Do they tell a supervisor what to look for and how to assess performance?
- Do they tell a worker the quality and quantity of work he is expected to produce, and how to judge when/whether that quality and quantity has been reached?

A. HAVE PERFORMANCE STANDARDS BEEN GENERATED TO EVALUATE BOTH THE WORKER ACTION (BEHAVIOR) AND THE RESULT (OUTPUT)?

EXAMPLE:

1. Asks client questions/listens to/transcribes/writes answers to specified items on application form, in order to complete application form for client.

Performance Standards:

What is being evaluated?

Descriptive:

Numerical:

RESULT: completed form.

.Form is accurate, complete, and legible.

.All (100%) of specified items are filled out on form.

A portion of WORKER ACTION: transcribes/writes.

.Asks questions clearly.

.Less than X% of clients complain of lack of clarity in questioning...

One phase of WORKER ACTION: asks questions.

.Manner is pleasant and courteous.

...or of worker's manner.

WORKER's behavior/ACTION towards the client.

Process of ACTIONS:

asks.../listens...

which RESULT in:

completed form.

B. PERFORMANCE STANDARDS SHOULD BE CONSISTENT WITH ORIENTATION PERCENTAGE/RESULT.

- Data emphasis yields Data Standards.
- People emphasis yields People Standards.
- Things emphasis yields Things Standards.

EXAMPLE:

1. Visually inspects applicants' files, noting missing information, and indicates omissions on form letter, in order to complete form letter to applicant requesting the missing information by return mail.

Data	People	Things
W.F.-ORIENTATION		
80%	5%	15%

Performance Standards:

Descriptive:

- .Checks files carefully and thoroughly
- .Missing information is accurately and completely recorded on form letter.
- .Files are inspected and omissions noted with reasonable speed.

Numerical:

- .No more than X# of applicants complain about being requested to send in data previously submitted.
- .No more than X# complaints of incomplete information in files due to omissions from form letters.

These Standards reflect the orientation of the task toward Data, with a minimal mention of Things (handling of files, paper, etc.). There are no People Standards, as there is no significant interpersonal interaction involved in this task.

C. PERFORMANCE STANDARDS MUST BE FEASIBLE.

- Be prepared for the fact that Numerical Standards usually require that an organization develop mechanisms and controls for generating and monitoring them. The statement of these Standards may point to ways in which the organization must be innovative and they may also highlight its dependence on the discretion of workers, and the limitations of what it can expect from supervisory control.

EXAMPLE:

3. Visually inspects applicant's files, noting missing information, and indicates omissions on form letter, in order to complete form letter to applicant requesting the missing information by return mail.

Performance Standards:

Descriptive:

Manner is pleasant and courteous.

Numerical:

No more than X# complaints from clients of worker's manner.

- Is there a process/procedure for complaints?
- Are the clients aware of it?
- How reliable is the data?
- Do you hear good as well as bad?
- Can you tell if the client is unhappy with the system or with the worker?

NOTE ON PERFORMANCE STANDARDS:

Since the Worker Action is a verb, it tends to be described by an adverb:

Asks questions clearly
verb adverb

Since the output/Result is a noun, it tends to be described by an adjective.

Plan is thorough.
noun adjective.

7. DOES THE TRAINING CONTENT REFLECT THE KNOWLEDGES AND ABILITIES REQUIRED TO PERFORM THE TASK?

- Does the Functional Training Content reflect
 - a) the required knowledges of processes?
 - b) the required abilities to function/perform actions or behaviors?
- Does Specific Training Content reflect
 - a) the required knowledges of the plant or organization (procedures, and how they determine the application of Functional abilities)?
 - b) the required abilities to perform under local conditions and specifications (according to knowledge of specific organization or plant)?

EXAMPLE:

1. Calculates/performs statistical analysis on population movements within state's correctional facilities, using a desk calculator, in order to compute data to be used in report requested by the Bureau Director.

Data People Things			Data People Things			Reas. Math Lang.			
W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.			
4	1A	1C	60%	5%	35%	3	3	3	3

Training Content:

Functional:

- .How to perform basic statistical analysis (formulae for computing measures of central tendency, deviations, correlations, etc.).
- .How to operate a calculator.

Specific:

- .How to perform statistical analysis of population movements.
- .How to operate X type of calculator.
- .Knowledge of general limitations of particular data: how collected, what type of sample, etc.
- .Knowledge of agency format for presenting statistical data.

8. IS THERE MORE THAN A ONE-LEVEL SPREAD BETWEEN DATA, WORKER INSTRUCTIONS, AND REASONING SCALE RATINGS?

-If so, can you defend the difference?

Each of these Scales looks at *intellectual functioning* from a somewhat different point of view. There is not a correspondence between levels in these three Scales, but they do closely parallel each other. If there is more than a one-level spread, the differences must be justifiable with evidence available in one or another of the columns.

EXAMPLE:

1. Guides parent in selection of resources to help their exceptional child, exploring with them the needs and behavior of the child and their preferences, and advising them regarding the use of available evaluation, training, treatment, and placement resources, in order to help parents to decide on and utilize treatment/placement resources.

One analyst rated this task:

Data People Things			Data People Things			Reas. Math Lang.		
W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
4	4A	1A	40%	55%	5%	6	5	3 5

There is more than a one-level spread between the Data level 4 and the **Instruction** level 6. Is this difference justifiable, using the information in the Task Statement? The spread in the ratings for Data, Worker Instructions, and Reasoning (4-6-5 respectively) should raise the question of whether one or another of the ratings is too high or too low.

The task of guiding parents in the selection of resources for their exceptional child involves more than, "examining, evaluating data with reference to criteria, standards, and requirements of a particular discipline..." (Data Scale, level 4, "Analyzing").

In order to guide the parents as indicated, isn't it necessary that the worker "Modify, alter, and/or adapt existing designs, procedures, or methods to meet unique specifications, unusual conditions, or specific standards of effectiveness within the overall framework of operating theories, principles..."? If so, we can alter the "Analyzing" rating to Data level 5, "Innovating", making it more consistent with the other ratings and the Task Statement.

Data People Things			Data People Things			Reas. Math Lang.		
W.F. -LEVEL			W.F. -ORIENTATION			INSTR. G.E.D.		
5A	4A	1A	40%	55%	5%	5	5	3 5

On the other hand, if "Innovating" is not necessary, and the task involves no more than "Analyzing", then it has been written in a way that exaggerates the performance expectations with regard to discretion (level of instructions) and should be reconsidered in this respect.

APPENDIX "A"

In reviewing the material submitted by participants in the Reliability-Validity Study for inclusion in the Editing Manual, considerable variation was found in the ratings for the task dealing with "translation", which follows:

Translates from one language to another questions on the application form and client's request for assistance, in order to enable the client to complete the form.

Independent raters assigned the following levels:

A.	Data	People	Things	Data	People	Things	Reas.	Math	Lang.
	W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
	4	2	1	70%	35%	5%	3/4	3	1 4
B.	Data	People	Things	Data	People	Things	Reas.	Math	Lang.
	W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
	3B	2	1A	30%	65%	5%	3	4	1 4
C.	Data	People	Things	Data	People	Things	Reas.	Math	Lang.
	W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
	4	2	1A	40%	55%	5%	4	4	1 4
D.	Data	People	Things	Data	People	Things	Reas.	Math	Lang.
	W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
	2	2	1A	65%	30%	5%	3	3	1 3
E.	Data	People	Things	Data	People	Things	Reas.	Math	Lang.
	W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
	1	2	1A	30%	60%	10%	2	3	1 3
F.	Data	People	Things	Data	People	Things	Reas.	Math	Lang.
	W.F.- LEVEL			W.F.-ORIENTATION			INSTR. G.E.D.		
	5A	2	1A	25%	70%	5%	3	3	1 4

This type of task is often misunderstood in terms of its functional level, since language is typically taken for granted. It should be noted that we are not referring here to the casual, imprecise, word-for-word, pot luck translations experienced by tourists or by resorting to a friend or acquaintance with, "You know a little Spanish; please tell me what this client is saying." Obviously, in these situations the translator is not responsible for the accuracy of the translation he makes.

Although the worker in this task is converting the material from the words (symbols) used by speakers of one language into the words (symbols) used by speakers of another, the basic task--that is, the one for which primary performance standards are applied--is not the translation itself, but the exchange of information which the translation enables the worker and the client to achieve. Thus, the translation is viewed as a catalyst (tool) to get the essential job done.

The task was edited as follows:

Talks about/discusses (in X language) items on English language application form with client (speaker of X language), answering client's questions and explaining meaning and purpose of items on form, elicits answers to items, and records answers in English on form, using own speaking, reading, and writing knowledge of English and X language, in order to complete form for client.

Data	People	Things	Data	People	Things		Reas.	Math	Lang.
W.F.- LEVEL			W.F.-ORIENTATION			INSTR.		G.E.D.	
4	2	1A	45%	50%	5%	3	3	1	4

Rather than attempt to cover the degree of skill which the worker must have to enable him to complete the task in the Scale ratings, they should be dealt with in Performance Standards, in which the editor can describe such things as degree of fluency, or correctness of pronunciation and clarity of speech.

Investigations indicate that it is practically impossible for a translator to function at any Data level lower than Analyzing. He has to decide whether to make a "word-for-word" translation, or to translate idiomatically. In word-for-word translation, a large part of the meaning of the original statement may be lost, because words have not only "dictionary" meanings (denotative meanings), which are standard for all users of the language, but also connotative meanings, or the emotional weight of the words governed by each user's experience.

This involves the worker with a wide range of variables, and a great deal of data. He must comply with the rules of structure, syntax, and semantics of both languages. He must also understand the content of the statement in the original language, and its equivalent in the second language, in order to give a full translation. Thus, the translator must Analyze.

In Analyzing, he must:

- a) Examine and evaluate data
 - 1) language equivalents
 - 2) statement content
- b) with reference to criteria, requirements, and standards
 - 1) content of the statement in original language.
 - 2) use for which translation is intended.
 - 3) desires of the originator of the statement.
 - 4) structures, syntax, and semantics of both languages.
- c) to determine interaction effects and consider alternatives.
 - 1) to determine which of several possible renderings of the original statement into the second language is preferable.

In certain situations, the translator may have to Innovate. For instance, if he is translating a piece of literature, he may:

- a) Modify, alter, or adapt existing designs, procedures, or methods
 - 1) change the denotative meaning of the original statement.
- b) to meet unique specifications, unusual conditions, or specific standards of effectiveness
 - 1) to include the connotative meaning of such things as rhyme, rhythm, and meter.
- c) within the overall framework of operating theories, principles, and organizational structures
 - 1) without departing from standard criteria of structure, syntax, or semantics of the two languages.
 - 2) without eliminating the original total meaning of the original language rendition.

Since the translator must interpret, evaluate, and make choices among alternatives, his own style, or personal method of using both languages, will make itself felt. This will make it necessary that the rating on the Language Scale (G.E.D.) be no lower than level 4, the first level at which the user's style comes into play. The language level will range through levels 4, 5, and 6, depending on the content and technicality (relative abtruseness) of the message, as delineated by the scale examples.

This point applies only to truly bilingual tasks, and not to those in which the worker, although bilingual, is using only one language, both in receipt and transmission of signals. The English ability of the worker has nothing to do with his functioning in a situation demanding only Spanish, and vice versa.

While "Analyzing" appears to be the minimum Data Function when truly bilingual translation tasks are involved, the functional relation to people can range from "Exchanging Information" (which will obtain even in "Taking Instructions" and "Serving" situations) through "Consulting", and, possibly, "Negotiating", where inclusion of a slang term or a term from another language other than the primary language of the discussion or contract is at issue.

ADDITIONAL NOTE:

Although bilingualism is not involved, to some degree the Functional Job Analyst must function in a similar manner in translating the everyday, casual language of job description (often involving the metaphoric use of verbs and the status use of nouns, adjectives, and adverbs) to the precise, taxonomic meanings of FJA. The Functional Job Analyst must continually probe to establish the true involvement of the worker in the task so that a reliable communication can be achieved--one replicable on the basis of scales.

GLOSSARY

These are only brief definitions of terms explained through examples in the body of the Editing Manual. In order to understand them within the conceptual framework of Functional Job Analysis, please refer to the Upjohn publication, An Introduction to Functional Job Analysis: A Scaling of Selected Tasks from the Social Welfare Field, by Sidney A. Fine and Wretha W. Wiley (c.1971), from which they are taken. The page numbers on which the definitions appear in that monograph have been indicated in parentheses at the end of each definition for ease of reference. Terms 3 through 8 are listed in the order of their appearance from left to right across the top of the analysis form used in the National Task Bank.

1. FUNCTIONAL JOB ANALYSIS (FJA): A conceptual system for defining dimensions of worker activity and a method of measuring levels of worker activity which provides a set of tools for establishing levels of tasks. (pp. 12-13).
2. TASK: An action or action sequence, grouped through time, designed to contribute a specified end result to the accomplishment of an objective, and for which functional levels and orientation can be reliably assigned. (p. 9).
3. WORKER FUNCTION SCALES: Three hierarchies of worker functions which define the simplest to the most complex worker behaviors in relation to Data, People, and Things. (p. 18).
4. ORIENTATION: A measure which indicates the relative involvement of the worker with Data, People, and Things as he performs a given task. (p. 15).
5. SCALE OF WORKER INSTRUCTIONS: A scale for measuring the proportions of prescription and discretion in the performance of a given task. (pp. 20-21).

6. SCALES OF GENERAL EDUCATIONAL DEVELOPMENT (GED):
Three scales - Reasoning, Math and Language - for determining the basic educational skill requirements necessary to perform a job at specified Data/People/Things levels. (p. 27).
7. PERFORMANCE STANDARDS: The Criteria against which the results of a worker's tasks are assessed. There are two types: Descriptive and Numerical. (p. 22).
8. TRAINING CONTENT: The skills and knowledges required to perform a given task. There are two types: Functional and Specific. (p. 24).